REMARKS

Claims 1-13 and 25-62 are pending in the current application. Claims 14-24 have been withdrawn from consideration, claims 1-13 and 25 have been amended and new claims 26-62 have been added hereby.

The Examiner has objected to claims 1-13 because of the use of the phrase "characterized in that". Claims 1-13 have been amended hereby to address the Examiner's objection and the withdrawal of this objection is respectfully requested.

The Examiner has rejected claims 1-13 and 25 under 35 U.S.C. § 112, second paragraph, as being indefinite. The claims have been amended hereby to address the specific rejections asserted by the Examiner. It is noted, however, that the phrase "short-term heating" which is specifically recited by the Examiner when rejecting claim 11 has not been amended hereby. As amended hereby, claim 11 calls for a glass/plastic composite film "wherein the composite film is temperature-stable up to 130°C, and up to 140°C in the case of short-term heating." As explained in the specification:

> In order to have the as many possibilities as possible for the further processing of the glass/plastic composite film and to ensure a high service life of the products produced on the basis of the glass/plastic composite film, the glass/plastic composite film is preferably permanently temperature stable up to 130°C (over several hours), and up to 140°C, preferably up to 180°C, and especially preferably up to 200°C, short-term temperature stable (a few minutes).

Application, page. 13, lines 4-10. Thus, calling for a composite film that is temperature stable up to 140°C in the case of short term heating is definite in light of the specification of the present application which explains that such short term heating has a duration of a few minutes. Thus, the withdrawal of the Examiner's rejection of claims 1-13 and 25 under 35 U.S.C. § 112, second paragraph, is respectfully requested.

The Examiner has rejected claims 1-13 and 25 under 35 U.S.C. § 102(e) as being anticipated by Verlinden (WO 99/21707). Claim 1, and claims 2-13 and 25 which depend therefrom, calls for a glass/plastic composite film for use in electronic components and devices such as displays that comprises a glass film having opposed side surfaces and a thickness of between 10 μm and 500 μm and a polymer layer applied on at least one of the side surfaces of said glass film with a thickness of between 1 μm and 200 μm, with the

polymer layer being applied directly to the at least one of the side surfaces, and wherein at least one side of the composite film has an optical retardation that is not more than 20 nm.

When rejecting claim 1, the Examiner argues, *inter alia*, that Verlinden discloses a composite film that is characterized in that on at least one side the optical retardation is not more than 20 nm. Verlinden does not specifically disclose any optical retardation values and the Examiner does not provide any supporting rationale for concluding that the structures disclosed by Verlinden have the claimed optical retardation values.

The present application discloses a composite film that is formed by applying a polymer layer on a glass substrate in a liquid phase to thereby produce a very thin and homogenous polymer film on the glass layer. Unlike such a composite film wherein a polymer layer is applied directly on a glass substrate in a liquid phase, Verlinden discloses a laminate structure that includes a glass substrate and a support that may be formed out of a layer of self-supporting polymeric material. Moreover, Verlinden specifically distinguishes the support layer of his disclosed structure from coatings applied directly to a substrate as follows:

> The laminate of the present invention comprises a thin borosilicate glass substrate and a support. The term "laminate" as used herein shall be understood as "a material consisting of a plurality of bonded layers". The glass layer and the support layer may be bonded to each other by applying an intermediate adhesive layer between said bonded layers but also vacuum lamination can be used as will be discussed below. The term "support" is used in the meaning of a "self-supporting layer" so as to distinguish it from layers which may be coated on a support but which are not self-supporting.

WO 99/21707, p. 4, lines 14-23. As described in the specification of the present application, the use of a self-supporting polymer layer with a glass layer to form a laminate structure has a negative impact on the optical retardation values of the resulting laminate structure:

> Moreover, polymer films usually show a far from inconsiderable optical retardation (double refraction) which is clearly over 20 nm. An optical anisotropy of the film is not permitted in displays which utilize the double refraction effect of liquid crystals. The lateral double refraction Δn in a film is obtained from the difference of the refractive index parallel and vertical to the process direction of the films. The optical retardation γ of a film with the thickness d is obtained

> therefrom from the product from the difference of the refractive indexes parallel and vertical to the process direction of the films and film thickness.
>
> Only substrates or substrate films with an optical retardation of < 20 mm can be used for LCD applications which utilize the double refraction of the liquid crystal. Most drawn films which are obtainable on the market show a multiple of this value, however. Only few films can be obtained that fall below this value. Due to more complex production methods they are very expensive however.
>
> Another factor in very thin polymer films is that they can be handled only with difficulty in a lamination process and therefore lead to adverse yields. They can be laminated free from warping only with difficulty, which can lead to additional tensions and to the warping of the laminate. Film laminates with a polymer film thickness of < 25 μm can hardly be produced on a major scale and in an economically viable manner.

Application, p. 5, line 14 to p. 6, line 6. In direct contrast to Verlinden who teaches the use a self-supporting polymer layer, the present application discloses the direct application of a polymer, in a liquid phase, on a glass film to form a polymer layer thereon to obtain certain advantages, including a low optical retardation value, as described below:

> As a result of the direct application of a polymer on the glass film surface without adhesive, namely in the liquid phase, it is achieved that the surface of the polymer layer virtually reproduces the surface of the glass film and shows its outstanding surface quality. If the production of the glass film and the pretreatment and the coating are planned as a continuous process, the polymer-coated glass film is now serialized.
>
> As a result of the application of the liquid phase on the rigid glass film it is also ensured that no direction of warping is formed in the polymer film and thus the optical retardation of the polymer film and, consequently, the composite film is less than 20 nm.

Application, p. 14, lines 5-15. Verlinden does not specifically disclose any optical retardation values for his laminate structures and the Examiner has not presented any reasoning that supports the conclusion that any of the laminate structures formed using self-

supporting polymer layers that are disclosed by Verlinden have an optical retardation value of less than 20 nm. Thus, claim 1 is patentably distinct over Verlinden and the allowance of claim 1, and claims 2-13 and 25 which depend therefrom, is respectfully requested.

It is additionally noted that claim 7 calls for a glass/plastic composite film wherein the polymer layer covers at least one edge of the glass film. As explained in the specification of the present application, a large percentage of glass breakage in glass films is caused by microcracks that start at the edge of the glass film. By covering an edge of the glass film with a polymer layer, the origination of new cracks and the propagation of pre-existing cracks may be inhibited. See Application, p. 12, lines 5-9. The Examiner refers to p. 12, lines 1-10 of Verlinden when rejecting claim 7, however, the Verlinden document does not disclose or suggest the use of a polymer layer to cover the edge of a glass film as called for in claim 7. Thus, it is respectfully submitted that claim 7 is also allowable for this additional reason.

With regard to new claims 26-62. Claims 26-36 depend from claim 1 and, thus, are allowable for the reasons discussed above with reference to claim 1 and the allowance of claims 26-36 is respectfully requested.

The remaining new claims 37-62 include two independent claims, i.e., claims 37 and 61. With regard to claims 37, and claims 38-60 which depend therefrom, it is noted that claim 37 calls for a glass/plastic composite film for use in electronic components and devices such as displays, wherein the composite film includes a glass film having opposed side surfaces and a thickness of between 10 μm and 500 μm and a polymer layer applied on at least one of the side surfaces of the glass film with a thickness of between 1 μm and 200 μm with the polymer layer being coated directly to at least one of the side surfaces, and wherein at least one side of the composite film has an optical retardation that is not more than 20 nm.

Similarly, claim 61, and claim 62 which depends therefrom, calls for a glass/plastic composite film for use in electronic components and devices such as displays, wherein the composite film includes a glass film having opposed side surfaces and a thickness of between 10 μm and 500 μm and a polymer layer applied on at least one of the side surfaces with a thickness of between 1 μm and 200 μm with the polymer layer being coated directly to at least one of the side surfaces of the glass film wherein at least one side of the composite film has an optical retardation that is not more than 20 nm and wherein coating the polymer layer directly to at least one of the side surfaces is selected from the group of spinning, spray spinning, casting, rolling, spraying or dipping.

Thus, claims 37 and 61 are similar to claim 1 discussed above with claim 37 further calling for the polymer layer to be coated directly on a surface of the glass film and with claim 61 further calling for the polymer layer to be coated directly on a surface of the glass film by either spinning, spray spinning, casting, rolling, spraying or dipping. As discussed above, Verlinden specifically distinguishes the support layer used with the laminates disclosed therein from a coating applied directly to a glass film and thereby also specifically teaches away from the subject matter of claims 37 and 61. Moreover, claims 37 and 61 also call for at least one side of the composite film to have an optical retardation that is not more than 20 nm. As discussed above with reference to claim 1, Verlinden does not disclose the provision of a laminate structure having an opitical retardation value of less than 20 nm and the Examiner has not provided support for the conclusion that any of the laminate structures disclosed by Verlinden have an optical retardation value of less than 20 nm. Thus, for these reasons, claim 37, and claims 38-60 which depend therefrom, and claim 61, and claim 62 which depends therefrom, are patentably distinct over Verlinden and the allowance of claims 37-62 is respectfully requested.

In the event Applicant has overlooked the need for any extension of time or payment of fee, Applicant hereby petitions therefor and authorizes that any charges be made to Deposit Account No. 02-0385, Baker & Daniels. Should the Examiner have any further questions regarding any of the foregoing, the Examiner is respectfully invited to telephone the undersigned at (260) 424-8000.

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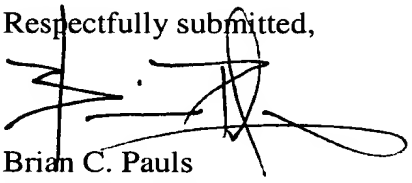
Applicant respectfully requests that a timely Notice of Allowance be issued in this application.

Respectfully submitted,



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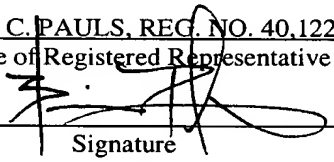

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